



# UNITED STATES PATENT AND TRADEMARK OFFICE

*jen*

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,280	09/18/2003	Arihiro Takeda	1117.68338	5624

7590 09/29/2006

Patrick G. Burns, Esq.  
GREER, BURNS & CRAIN, LTD.  
Suite 2500  
300 South Wacker Drive  
Chicago, IL 60606

EXAMINER

DUONG, THOI V

ART UNIT	PAPER NUMBER
----------	--------------

2871

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/665,280

**Applicant(s)**

TAKEDA ET AL.

**Examiner**

Thoi V. Duong

**Art Unit**

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 22,26,34 and 35 ~~is~~ are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22,26,34 and 35 ~~is~~ are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 10/047,216.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/10/06</u> . | 6) <input type="checkbox"/> Other: _____  |

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 10, 2006 has been entered.

Claims 1-21, 23-25 and 27-33 were cancelled and claims 22, 26, 34 and 35 are pending in this application.

***Allowable Subject Matter***

2. The indicated allowability of the application is withdrawn in view of the newly discovered reference, US 6,593,982 B2 to Yoon et al.. Rejections based on the newly cited reference follow.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

Art Unit: 2871

directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 22 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoon et al. (Yoon, USPN 6,710,837 B1).

Re claim 22, as shown in Figs. 10 and 11, Yoon discloses a liquid crystal display device comprising:

- a first substrate 1 having thereon a pixel electrode 50 in an active element;

- a second substrate 60 having thereon an opposed electrode 80; and

- a liquid crystal layer interposed between said first and second substrates with said electrodes facing each other (Fig. 11),

- wherein, as shown in Fig. 10, a first orientation control element 51 and 81 extending in a nonparallel direction relative to an extending direction of an edge (vertical edge) of said pixel electrode 50 and a second orientation control element in portions A-D extending in a parallel direction relative to the extending direction of said edge are provided on at least one of said first and second substrates (col. 7, line 46 through col. 8, line 51),

- wherein said first orientation control element 51, 81 is provided on said first and second substrates 1 and 60 respectively (Fig. 11),

- wherein, at least a part of liquid crystal molecules 90 of said liquid crystal layer on said second orientation control element are orientated in a vertical direction relative

Art Unit: 2871

to said substrate 20 when voltage is being applied between said pixel and opposed electrodes (see Fig. 1B and col. 3, lines 46-51),

wherein the first orientation control element 51 is a slit formed in said pixel electrode 50 in an oblique direction relative to the extending direction of said edge (Fig. 10), and

wherein said second orientation control element in portions A and C is provided on said second substrate 60, and said pixel electrode 50 does not exist on at least a part of a place on said first substrate 1 opposed to said second orientation control element as shown in Figs. 10 and 11.

Re claim 26, a dielectric anisotropy of said liquid crystal molecules 90 of said liquid crystal layer is negative (col. 6, lines 63-65).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoon et al. (Yoon, USPN 6,710,837 B1) in view of Song et al. (Song, US 6,710,837 B1).

Yoon discloses a liquid crystal display device that is basically the same as that recited in claims 34 and 35; however, Yoon does not disclose that the liquid crystal molecules on said second orientation control element are oriented in a non-vertical

Art Unit: 2871

direction relative to a longitudinal direction of said second orientation control element when no voltage is applied.

As shown in Fig. 9, Soon discloses a liquid crystal display device comprising an orientation control element 171 for controlling the liquid crystal molecules, which are oriented in a non-vertical direction relative to a longitudinal direction (vertical direction) of the orientation control element when no voltage is applied, wherein said liquid crystal molecules on said second orientation control element 171 are oriented in a direction of 45 degrees relative to the longitudinal direction (vertical direction) of said second orientation control element (col. 8, lines 22-51).

Accordingly, it is obvious that the liquid crystal molecules on the second orientation control element of Yoon are also oriented in a non-vertical direction relative to a longitudinal direction (vertical direction) of the orientation control element when no voltage is applied since the second orientation control of Yoon is also disposed on the vertical edge of the pixel electrode for controlling the liquid crystal molecules as shown in Figs. 10 and 11.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

Art Unit: 2871

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms, can be reached at (571) 272-1787.

Thoi V. Duong

A handwritten signature in black ink, appearing to read 'Thoi V. Duong', written in a cursive style.

09/21/2006